January 21, 2022

US Department of Transportation
Docket Operations
1200 New Jersey Avenue, SE
Room W12-140
Washington, DC 20590

In accordance with 14 CFR §11.15 and §11.81, I, Randal R. Rowles, petition on behalf of Longhorn Helicopters, Inc. dba Helicopter Institute (HI), Air Carrier Certificate L62A (A031 Contract Training Provider) and Air Agency Certificate L62S (FAA NVG Inspector Training Contract Provider) for an exemption for relief from §§91.205(h)(7) and 91.1(a).

**The nature and extent of the requested regulatory relief and reasons for requesting the relief:**

The relief sought is to allow for helicopter Night Vision Goggle (NVG) training operations with radar (radio) altimeters that are unreliable or not normally functioning due to radio frequency interference caused by the Federal Communications Commission's (FCC) allocation of a portion of the 3.7–3.98 GHz frequency band available for flexible use including 5G cellular applications.

The relief sought would allow HI to provide NVG flight operations and pilot training for Part 135 helicopter operators (including helicopter air ambulance (HAA)), and FAA Safety Inspectors in helicopters without a normally functioning radar altimeter in accordance with 91.205 (h) (7) and /or rotorcraft flight supplement limitations (§91.9(a)) including landings at off-airport or unimproved landing areas.

**We support our request with the following information:**

The Radio Technical Commission for Aeronautics (RTCA) compiled a report (RTCA Paper No. 274-20/PMC-2073) that revealed a major risk that 5G telecommunications systems in the 3.7–3.98 GHz band (C-Band) will cause harmful interference to radar altimeters on all types of civil aircraft including commercial transport airplanes; business, regional, and general aviation airplanes; and both transport and general aviation helicopters. The results of the study performed clearly indicate that this risk is widespread and has the potential for broad impacts to aviation operations in the United States, including the possibility of catastrophic failures leading to multiple fatalities, in the absence of appropriate mitigations. Further, the impacts are not only limited to the intentional emissions from 5G systems in the 3.7–3.98 GHz band, but also the spurious emissions from such systems within the protected 4.2–4.4 GHz radar altimeter band. Currently, areas affected by 5G C-Band emissions are identified by NOTAM.

The use of NVGs requires a normally functioning radar altimeter in accordance with §91.205 (h)(7) and limitations set forth in rotorcraft flight manual supplements for

operations using NVGs. NVGs are presently used by the HAA industry to increase the level of safety while conducting vital life-saving operations. With effective mitigations, HI believes safe NVG training operations can be conducted at night, including takeoffs and landings at off-airport and unimproved landing sites with a radar altimeter that is not functioning normally due to 5G C-Band cellular interference.

Helicopter Association International (HAI) petitioned for and was granted a similar exemption, Exemption 18973.

**The reasons why a grant of exemption would be in the public interest and would benefit the public as a whole:**

HI believes a Grant of this Petition is in the best interest of the public and is reasonable due to the following:

- HI provides NVG pilot training to multiple Part 135 HAA operators throughout the US. Without an exemption, these operators would not be able to use HI to conduct training and checking on NVGs which would preclude their ability to conduct HAA type operations for which relief was granted in Exemption 18973.

- HI provides NVG pilot training to FAA Safety Inspectors under FAA Contract# 6973GH for Initial, Recurrent, EBC, and direct rental. Without exemption, FAA Safety Inspectors would not maintain NVG currency which would preclude their ability to conduct FAA proficiency checks for HAA operators that have been granted exemption to conduct HAA operations.

- HI provides NVG pilot training to Federal, State, County, and other Law Enforcement entities operating aircraft in "other than" public aircraft status. Without exemption, Law Enforcement agencies would not maintain NVG currency which would preclude their ability to conduct Law Enforcement operations where non-mission related passengers are required to be flown aboard agency operated aircraft. Several of these Law Enforcement operators provide HAA type operations.

**The reason(s) why a grant of exemption would not adversely affect public safety or how the exemption would provide a level of safety at least equal to that provided by the rule(s) from which the exemption is sought:**

As stated in the previously issued HAI exemption, an equivalent level of safety can be maintained in NVG operations through the use of a moveable searchlight. Use of a searchlight will allow for better visual cues for the pilot to determine height above the ground and to assist in determining rates of closure when landing at **off-airport or unimproved landing sites**.

In some cases, HI NVG equipped training helicopters were not equipped with a moveable search light as this is not required equipment per 14 CFR Part 91.206(h). This limitation is not limited to HI NVG equipped aircraft as the Bell Training Academy and Airbus Helicopter Training Academy also **DO NOT** have moveable searchlights. This information was verified prior to submission of this Petition for Exemption request.

To mitigate risk during NVG training flights without a moveable searchlight, HI will only conduct operations at two (2) airports where we conduct our normal daylight operations and have been evaluated during daylight hours.

The two (2) airports HI will utilize for NVG training flights will be:

1. Fort Worth Meacham International Airport – FTW (HI base of operations)
2. Kenneth Copeland Airport - 4T2

HI proposes that an equivalent level of safety will be maintained provided the following Conditions and Limitations are complied with.

**Conditions and Limitations**

1. For helicopter operations using NVGs, including operations to and from off-airport and unimproved landing sites, such operations may be conducted in areas where a NOTAM identifies the radio altimeter as unreliable, provided:

    a. The aircraft is equipped with an operable radio altimeter.

    b. The pilot monitors the radio altimeter and uses it when it is performing normally.

    c. The aircraft is equipped with a moveable searchlight installed via an FAA- approved installation method, which the pilot must use to assist in determining height above the ground and rates of closure. For aircraft not equipped with a moveable searchlight, NVG operations will be limited to the following airport(s):

        - Fort Worth Meacham International Airport - FTW
        - Kenneth Copeland Airport – 4T2

    d. Prior to use for training, off-airport or unimproved landing areas must be evaluated during daylight within the **14 days** prior to use for suitability and safety for NVG operations. The pilot must perform a high reconnaissance to assess the landing location prior to conducting operations at off-airport or unimproved landing areas.

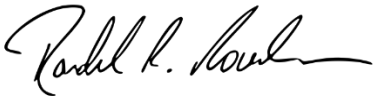
2. All pilots conducting NVG operations under the provisions of this exemption must receive training on the applicability and use of this exemption prior to serving in an operation under this exemption.

As the Federal Communications Commission (FCC) has allowed new 5G C-Band services to operate in the 3.7-3.98 GHz C-Band range to already be in effect, **I request the petition be given the highest priority and be processed in a most expeditious manner to avert an interruption in lifesaving HAA operations, the ability to maintain FAA and Law Enforcement pilot currency and proficiency to sustain HAA and other public safety NVG flight operations.**

**Summary**

Helicopter Institute (HI), petitions, for an exemption for relief from §§91.205(h)(7) and 91.9(a) to allow for operations to be conducted under 14 CFR Part 61, 135, and 141, including operations with NVGs and night landings and takeoffs from unimproved or off-airport sites, with an unreliable or not normally functioning radar (radio) altimeters, and NVG operations limited to two airports with NVG helicopters not equipped with moveable searchlights.

Sincerely,



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